IDENTIFICATION AND OCCUPATIONAL STRESS: A STRESS BUFFERING PERSPECTIVE

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Abstract

Occupational stress research has consistently demonstrated many negative effects of work stressors on employee adjustment (i.e., job-related attitudes and health). Considerable literature also describes potential moderators of this relationship. While research has revealed that different workplace identifications can have significant positive effects on employee adjustment it has neglected investigation of their potential stress buffering effects. Based on identity theories, it was predicted that stress buffering effects of different types of identifications (distal versus proximal) would be revealed when the identification type and employee adjustment outcome type (distal versus proximal) were congruent. Predictions were tested with an employee sample from five human service nonprofit organizations (N = 337). Hierarchical multiple regression analyses revealed that main and moderated effects relating to identification supported the notion that occupational stress would be reduced when there was congruence of distal and proximal identifications and distal and proximal outcome types. However, stress suffering effects were also found for high identifiers and low identifiers that were not in line with hypotheses posing questions for the definitions of distal and proximal identifications. Findings are discussed in terms of theoretical and practical implications.

Introduction

Occupational stress is a world-wide issue with implications for employees, organizations, and economies. From an economic perspective, the cost of stress has been estimated to be between 200 and 300 billion dollars in the USA (Atkinson, 2000) and up to 10 per cent of a country's gross domestic product (Midgley, 1997). From an organizational perspective, the costs include lost productivity, stress-related law suits and health care expenses (Sulsky & Smith, 2005). At the individual level, Siegrist (1998) reported that the cost of unmanaged stress is, at a minimum, represented by an increased risk of morbidity and mortality, highlighting that the ultimate consequence of stress for employees can be life threatening. Indeed, research has highlighted the importance of effective management of occupational stress to human resource practitioners who are increasingly concerned with ensuring that human resource practices promote employee health, positive job-related attitudes, and performance (e.g., Ngo, Foley, & Loi, 2005; Quick, Macik-Frey, & Cooper, 2007). Thus, it is imperative that organizational leaders and managers understand the occupational stress process and integrate this knowledge into their strategic and operational decision-making.

As a result of the vast consequences of stress, researchers have invested considerable efforts into identifying variables that directly impact employee adjustment or that moderate or buffer the negative effects of work stressors on employee adjustment [i.e., job related attitudes (such as job satisfaction, organizational commitment, and intentions to leave), and psychological health]. Many buffers of stressors on adjustment have emerged, adding to the complexity, but necessary relevance, of occupational stress theories. One construct that has received little attention by researchers in a work stressor-employee adjustment context is the role of identification, and more critically, the role of different types of identifications that one might have within an organization. Indeed, identifications within an organization can relate to

distal or proximal aspects of the organization or workplace and it is possible that these may in turn be differently related to the occupational stress process. This study aimed to investigate the relationship between different identifications associated with the organization and the work unit, and their relative potential to reduce the effects of work stressors on employee adjustment. In doing so, this study investigates the potential stress buffering effects of high levels of distal (organizational, corporate, and humanistic) and proximal (work unit) identifications on both distal and proximal indicators of employee adjustment.

The human service nonprofit (or not-for-profit) organizational context was selected as a dynamic setting for the investigation of different workplace identifications in an occupational stress context. First, human service nonprofit (HSNP) organizations are notable for the prevalence of stressors. Employees are often underpaid, must make challenging decisions concerning human welfare, and often work long hours in a tightly funded environment. These factors provide a solid foundation from which stressful conditions can emanate, leading to ambiguity, conflict, and overload (Leiter & Newton, 2010). Second, HSNP organizations are often characterised by multiple and strong identities. For instance, strong identifications can develop relating to the organization (or aspects of the organization such as its humanitarian focus, or its corporate brand). On the other hand, nonprofit organizations are often characterized by tightly formed programs or work units that have a specific client-focussed function. As such, employees can develop very strong identifications with their work unit. It is important to note that these different identifications are not necessarily working against each other in a conflictual manner; rather, they present opportunities for employees to be more strongly identified with different aspects of the organization or parts of the organization.

Occupational Stress

There is substantial empirical evidence to show that psychosocial risk factors at work predict undesirable physiological conditions (e.g., gastrointestinal malfunction, cardiovascular morbidity, and mortality) and psychological responses (e.g., anxiety, depression, and burnout) among employees (see van der Doef & Maes, 1999). Further, occupational stressors have been shown to influence employee attitudes (e.g., job dissatisfaction and organizational commitment) and employee behaviors that have implications for organizational effectiveness (e.g., absenteeism, turnover, and reduced job performance; see Kahn & Byosiere, 1992).

A myriad of work stressors have been investigated with respect to their impact on employee adjustment. A considerable body of literature has focused on work stressors related to characteristics of the role and specific tasks being performed. There are a large number of empirical studies across all organizational settings that have investigated work stressors and employee outcomes, along with several meta-analytic reviews (see Abramis, 1994; Jackson & Schuler, 1985; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). Örtqvist and Wincent (2006) conducted a meta-analysis of 295 studies that involved role ambiguity (uncertainty about what is required to perform a role), role conflict (conflicting information about the same role or job), and role overload (too much work to complete) and their effects on employee outcomes. Generally, role ambiguity was related to increased tension (reduced psychological health) and indicators of burnout (i.e., emotional exhaustion, depersonalization, and low personal accomplishment) and less favorable levels of job-related attitudes (i.e., job satisfaction, organizational commitment, and turnover). Role conflict also was related to higher levels of emotional exhaustion and lower job-related attitudes and psychological health. Lastly, role overload was related to higher tension, exhaustion, depersonalization, and propensity to quit, as well as lower commitment to the organization and psychological health.

Hypothesis 1: Less favorable levels of work stressors (role conflict, role clarity, role overload) will be related to (a) less favorable job-related attitudes (job satisfaction, intentions to leave, organizational and work unit commitment) and (b) lower levels of psychological health.

Identification and the Work Stressor–Employee Adjustment Relationship

Researchers have outlined negative consequences of work stressors for organizations and employees and have investigated factors that may moderate or buffer their negative effects (e.g., Cohen & Edwards, 1989; Theorell & Karasek, 1996). Such moderation effects occur via a 2-way interaction in which an additional variable buffers the negative effects of work stress on employee adjustment by allowing the employee some means of coping with the demanding situation. The stress-buffering hypothesis is commonly used to describe the effects of a range of different variables that may protect individuals from the negative effects of stressful life events (Cohen & Edwards, 1989). Indeed, several stress-buffering models have been proposed in the occupational stress literature. For instance, the Job Demand-Control Model (JDCM: Karasek, 1979) proposes control over daily tasks mitigates the negative impact of job demands on levels of employee adjustment. This model was later extended by Karasek and Theorell (1990) and Theorell and Karasek (1996) to include support. The revised Job Demand-Control-Social Support Model proposes further interactive effects of demands, control, and social support in the differential prediction of employee adjustment. For instance, the model predicts that employee adjustment should be lowest in conditions of high work demands combined with low levels of both control and social support.

Research has identified many other moderators of the work stressor-employee adjustment relationship. For instance, these include type A behavior (Kushnir & Melamed, 1991), locus of control (e.g., Daniels & Guppy, 1994; Vahtera, Pentti, & Uutela, 1996), self -

efficacy (Jimmieson, 2000), self-esteem (Makikangas & Kinnunen, 2003), proactivity (Parker & Sprigg, 1999), trust in management (Harvey, Kelloway, & Duncan-Leiper, 2003), and subjective fit with the organization's culture (Newton & Jimmieson, 2008, 2009). Further, perceptions of the balance between effort and rewards for providing the effort have been identified as moderators of the work stressor-adjustment process (Siegrist, 2002). At the task level, role clarity has also been found to buffer the negative effects of stressors on adjustment (Bliese & Castro, 2000). While research has identified that a variety of task and individual difference variables can buffer the negative effects of stressors on adjustment, the study of identification-related variables in this context is under-developed.

Social Identity Theory (SIT: Tajfel & Turner, 1986) states that a person has not one personal self, but rather several selves that correspond to widening circles of group membership. Different social contexts may trigger an individual to think, feel, and act on the basis of a personal, family or national level of self. The concepts underlying SIT have been applied to organizations resulting in the development of organizational identity and identification (Ashforth & Mael, 1989). Organizational identification (OI) refers to a member's feeling of a sense of oneness with an organization and it is proposed that individuals who identify strongly with their organization are more likely to act in accordance with the organization's values and culture (Ashforth & Mael, 1989).

Identification in the workplace is not confined to an organizational level--one may identify with their particular workgroup or a social group comprised of employees drawn from different workgroups. Therefore, some workplace identifications might be nested within others. Ashforth and Johnson (2001) discuss the concept of nested identity highlighting that they vary on three dimensions: inclusive/exclusive, abstract/concrete, and distal/proximal. Higher order identities (e.g. organizational identity) are generally more inclusive--including lower order identities (such as workgroup or department). Lower order identities tend to be

more exclusive as they do not include higher order identities and membership is restricted to those who meet certain criteria. Higher order identities are considered to be more abstract as they can potentially include many diverse lower order identities. On the other hand, lower order identities are considered to be more concrete as they represent the local means or action levers by which higher order identities are put into play. Lastly, higher order identities are more distal as their impact on an individual tends to be more indirect and delayed (Ashforth & Johnson, 2001). Conversely, lower order identities are more proximal--their impact is more direct and immediate for individuals.

The present study explores multiple levels and types of identification that have either been identified by previous research, or are particularly relevant to the HSNP sector. First, organizational level identifications are assessed starting with identification with the organization in general. However, research has demonstrated that HSNP organizations are characterised by some unique aspects with respect to their overall organizational identity. For instance, literature has documented the presence of organizational identities related to helping disadvantaged people in the community – representing the humanistic component (see Cornwell & Coote, 2005). From another perspective, nonprofit organizations are increasingly required to respond to pressure from funders and society in general to become more business- or corporate-like (Leiter & Newton, 2010). Indeed, the incorporation of a corporate component in nonprofit identities is vital as nonprofits respond to demands for accountability and transparency in their dealings and as they seek to remain sustainable and viable in an environment that is competitive with limited funding available. As such, three higher order identifications are relevant to the present study: organizational, humanistic, and corporate identification. Second, as previously noted, identifications can also be made with more proximal aspects of the work environment. In line with most organizational structures, identification with the work unit represents a proximal identification in the present study.

Several points can be noted with respect to the relationships between different identifications and employee adjustment. Indeed, OI theory posits that higher order identities are more inclusive, abstract and distal – their effects are delayed and more indirect than lower order identities. In terms of employee adjustment, it then follows that higher order identifications (i.e. organizational, corporate, and humanistic identifications) will have a greater impact on more distal, organization-related outcomes. This proposition is supported by SIT which suggests that a strong identification with the organization would lead to better intergroup relations due to a shared group identity across organizational groupings. This would subsequently influence (more favorably) attitudes related to the organization overall. Indeed, empirical research has found various facets of organizational identification to positively predict job satisfaction (van Knippenberg & van Schie, 2000) and intentions to stay (Mael & Ashforth, 1995; van Knippenberg & van Schie, 2000). Moreover, Riketta's (2005) meta-analysis based on 96 separate samples found that organization identification was strongly correlated with job- and organization-related variables such as job satisfaction, organizational satisfaction, affective organizational commitment, occupational attachment, and intentions to stay in the organization.

Conversely, OI theory suggests that a lower ordered identification (such as work unit identification) will be more concrete, proximal, and direct. Such identification will be more salient and more likely to impact more proximal outcomes that are closely related to the individual and the work unit. According to SIT, a strong lower order identification would lead to better intragroup relations because there would be a shared group identity within the group. Indeed, work unit identification has been positively related to work- and team-related attitudes moreso that organizational level identifications (e.g., Hennessy & West, 1999). It follows that this proximal effect will then more likely influence the work-related psychological health of employees.

Essentially, though, researchers have not explored the effects of identification in the context of the work stressor-employee adjustment relationship are unclear. It can be argued that identification is vital to this relationship. Indeed, theory and empirical research suggests that there are a number of different ways that identification may moderate the work stressor-employee adjustment relationship: through enhanced social support and coping, sense of belonging, and/or subjective fit with the organization.

First, scholars such as Haslam, Postmes, and Ellemers (2003) and Gioia, Schultz, and Corley (2002) propose that organizational identification is potentially an extension of social (collective) identification. SIT (Tajfel & Turner, 1979) allows us to understand how individuals can be part of a social group (e.g., an organization), via processes of self-categorization and psychological commitment (Haslam, 2001). It highlights the causes of ties between individual(s) and an organization, assists in understanding the relative strength of these ties in different circumstances, and enables prediction of consequences for group behavior (Haslam, et al., 2003). Within the context of stress research, a shared social identity represents the basis for social support and coping. Indeed, considerable literature demonstrates that a shared social identity (incorporating a process of categorizing oneself with a group) leads to a greater provision of social support to other in-group members (Levine, Cassidy, Brazier, & Reicher, 2002). Further, researchers have found a shared social identity can lead to the dissolution of the potential negative personal effects of stressors, via a process of redefining the stressors to be a source of collective eustress or challenge (Branscombe, Schmitt, & Harvey, 1999).

Several studies relating to identification (in its various forms) provide some support for the notion that identification can buffer the negative effects of work stressors on adjustment. Elovainio and Kivimaki (2001), with a homogenous sample of newly employed females, found that occupational identification significantly mediated the effect of role

ambiguity on psychic strain (i.e., concentration, nervousness, and depression). Similarly, Witt, Patti, and Farmer (2002) investigated the potential moderating influence of occupational and organizational identification on the relationship between organizational politics and organizational commitment and found that perceptions of politics were less adverse to commitment amongst workers that primarily identified with their occupations. These results are important to the current study as they are indicative of a more complex role relating to identification in the work stressor-adjustment relationship.

The sense of belonging and subjective fit literatures also provide insight into potential buffering effects of identification on the work stressor-employee adjustment relationship. First, components of the definition of a 'sense of belonging' include a valued involvement and a fit of the person's perception that their characteristics complement the environment (Hagerty, Lynch-Sauer, Patusky, Bouwsema, & Collier, 1992). This definition has similar characteristics to identification in that it is partially about values and a match of the person to the focus of the identification. Indeed, Sargent, Williams, Hagerty, Lynch-Sauer and Hoyle (2002) found that higher levels of a sense of belonging in navy recruits had a significant buffering effect on the effects of 'new recruit stress' on depressive symptoms for both depressed and non-depressed recruits. As such, a variable similar to identification (a sense of belonging) was found to buffer the negative effects of stress on strain in an extremely homogenous and clinical, yet organizational sample.

Second, subjective fit with organizational culture has been found to moderate the work stressor-employee adjustment relationship. Indeed, the concepts underlying identification and subjective fit with organizational culture have similarities with both relying (to differing degrees) on an identification or oneness with the organization. In particular, Newton and Jimmieson (2009) found stress-buffering properties of high subjective fit in relation to job satisfaction, organizational commitment and physical symptoms. Similar

buffering effects have been found for psychological health (Newton, 2006). These results provide support for the notion that identification can be important in the buffering of stressors on adjustment.

In this study, we are interested in whether there is a difference in the moderating potential of different types of identifications in the stressor-employee adjustment relationship relative to distal or proximal (higher versus lower order) identifications. The fundamental theoretical logic underlying identification applies to a moderating or buffering context. For instance, with respect to organization-level identifications (i.e., organizational, corporate, and humanistic identifications), OI theory and SIT suggest that strong higher order (distal) identifications will be effective in sponsoring better intergroup relations. Thus, a mechanism for broad-ranging support is enacted, potentially reducing the negative effects of work stressors on more global and organizationally-oriented employee adjustment outcomes (such as job satisfaction, affective organizational commitment, and intentions to leave the organization). Conversely, with respect to lower-ordered (proximal) work unit identifications, an SIT perspective suggests that a strong identification would elicit coping and support structures within the group. As such, this strengthening of intragroup relations would act to reduce the negative effects of work stressors on employee adjustment indicators (such as work unit commitment and psychological health) that are more central to the work unit and the people within.

Hypothesis 2: Higher levels of organizational, corporate, and humanistic identification will mitigate the negative effects of work stressors (role conflict, low role clarity, and role overload) on job satisfaction, organizational commitment, and intentions to leave the organization.

Hypothesis 3: Higher levels of work unit identification will mitigate the negative effects of work stressors (role conflict, low role clarity, and role overload) on work unit commitment and psychological health.

METHOD

Participants and Organizations

Purposeful (maximum variation) sampling was employed (see Patton, 1990). As such, a diverse range of human service nonprofit organizations were approached to enable investigation of patterns relating to individual perceptions of work stressors and employee adjustment. Five organizations (A, B, C, D, and E) agreed to participate in the research. All organizations were operating in the human services domain (e.g., deaf services, aged care, and disability services). Response rates ranged from 45.6% to 65.7% with an overall response rate of 51.1% across all organizations. Responses were pooled (N = 337) to assess individual level hypotheses proposed in this paper. For the overall sample, ages ranged from 18 to 71 (M = 39.07, SD = 11.52) with most participants reporting their gender as female (81%). The mean organizational tenure was 4.18 years (SD = 5.27) with 69% of participants reporting they worked fulltime and 18% working part time. The sample included participants from across hierarchical levels including clerical (25%), line workers (27%), middle management (30%) and senior management (12%). Highest educational qualifications among the participants included a degree (31%), a certificate (15%), diploma (13%), and senior school (12%).

Procedure

The same procedure was concurrently employed in all organizations. Employees were informed that a survey was taking place one month prior to distribution. For all organizations, the researcher visited and spoke directly to supervisors and employees about the survey within the month preceding its distribution. Email reminders were sent to all employees

encouraging participation in the survey prior to distribution, and one week into the 2-week survey period. Employees received their invitation to participate via email which included a link to the survey which was stored on a secure University server. Participants had the opportunity to request a paper-based survey however no employees opted to complete the survey in this way.

Measures

The focal variables of the study included work stressors (role conflict, role ambiguity, and role overload), identification (organizational, corporate, humanistic, and work unit), and employee adjustment assessed in terms of job-related attitudes (job satisfaction, organizational and work unit commitment, and intentions to leave), and employee psychological health. Constructs are reviewed below.

Role conflict. Perceptions of role conflict were measured using Caplan, Cobb, French, Harrison, and Pinneau's (1980) 3-item scale (e.g., "People in equal rank and authority over you ask you to do things which conflict"). Responses were rated from 1 (*very little*) to 7 (*a great deal*).

Role ambiguity. Perceptions of role ambiguity were measured using Caplan, et al.'s (1980) 4-item scale (e.g., "I am often clear about what my job responsibilities are"). Responses were rated from 1 (*very little*) to 7 (*a great deal*). All four items were recoded so that high scores reflected higher levels of role ambiguity.

Role overload. Perceptions of role overload were measured by using Caplan et al.'s (1980) 4-item scale that included "My job requires me to work very fast". Responses were rated from 1 (*very little*) to 7 (*a great deal*).

Identification. Levels of organizational identification were assessed using Mael's (1988) measure of organizational identification for this study. An example item is 'I feel a strong sense of belonging to the organization' was rated from 1 (*strongly disagree*) to 5

(*strongly agree*). Mael's (1988) measure of organizational identification was adapted to assess different foci of identification in the organizational context. An example item for humanistic identification is 'When someone praises this organization for its humanistic focus it feels like a personal compliment'. An example item for corporate identification is 'When someone criticises this organization's corporate focus, it feels like a personal insult.' An example work unit identification item is 'I feel a strong sense of belonging to my work unit'. An exploratory factor analysis using Varimax rotation revealed a four factor solution for the identification construct.

Job satisfaction. Perceptions of job satisfaction were measured using Warr, Cook and Wall's (1979) 3-item scale. The scale was designed to measure how employees' levels enjoyment, satisfaction, and happiness with their job in general with an example scale ranging from 1 (e.g., *I am not happy*) to 5 (e.g., *I am extremely happy*).

Organizational and work unit commitment. Employee levels of affective organizational commitment were measured using four items originally from Meyer and Allen (1991) designed to assess the affective or emotional component of this construct. These four items were identified by Eisinga, Teelken, and Doorewaard (2010) as well performing across cultures, and specifically outside of North America where the affective organizational commitment scale was developed. Items assessed included 'I feel emotionally attached to this organization', with responses rated from 1 (*strongly disagree*) to 5 (*strongly agree*). Affective work unit commitment was assessed using Meyer and Allen's culturally revised scale adapted to the work unit level. An example item is 'I feel emotionally attached to this work unit'.

Intentions to leave. Respondent's intentions to leave the organization were assessed using a 3-item scale developed by Fried, Tiegs, Naughton, and Ashforth (1996). An example item include "Do you seriously intend to resign from your job in the near future?" with items rated from 1 (*definitely not*) to 5 (*definitely yes*).

Psychological health. Perceptions of psychological well-being were assessed using the 12-item version of the General Health Questionnaire (GHQ-12, Goldberg, 1972). Respondents were asked how their health had been in general over the last few weeks by responding to a 5-point scale (e.g., "Have you been able to enjoy your day-to-day activities?"). Response options ranged from 1 (*much less than usual*) to 5 (*much more than usual*). Items responses were recoded such that higher average ratings indicated more favorable health.

Gender and age. Gender (*male/female*) and age (measured continuously) were controlled for in all analyses in light of research demonstrating differences in perceptions of focal variables assessed in this study (e.g., Chandraiah, Agrawal, Marimuthu, & Manoharan, 2003; Nelson & Burke, 2002) and given that preliminary analyses revealed differences in some stressor and adjustment variables.

Negative affectivity. Watson and Pennebaker (1989) reported that negative affectivity can potentially act as a 'nuisance' variable; especially in cross-sectional research of stress and strain (see also Williams, Cote, & Buckley, 1989). Brief, Burke, George, Robinson, and Webster (1988) highlight that a way to limit this effect is to control for the impact of negative affectivity on stress and well-being measures in the organizational context. Negative affectivity was assessed using an 11-item scale developed by Agho, Price, and Mueller (1992). Items include "I am too sensitive for my own good" and were rated on a 5-point scale from 1 (*not at all*) to 5 (*all the time*).

Results

Preliminary Data Analyses

Descriptive data (means and standard deviations) and inter-correlations are displayed in Table 1 and show that most correlations were low to moderate, indicating that multicollinearity was not a serious threat to the analyses (Tabachnick & Fidell, 2001).

Insert Table 1 about here

As individual responses were nested within five organizational groupings, the extent that the proportion of variance in each of the focal variables was due to group differences was examined by computing the intraclass correlation coefficient (ICC(1): see Bryk & Raudenbush, 1992). From a one-way random-effects ANOVA model, the ICC(1) was calculated (Bliese, 2000). A minimum value of at least .10 is generally required for aggregation of a variable to the group-level (Bliese, 2000). As no variable was characterized by an ICC(1) value that exceeded .10 the effect of the group is unlikely to influence the results. As such, it was considered appropriate to examine the data at the individual-level of analysis and not control for organizational membership in the analyses.

Common Method Variance

Harman's single-factor test was used to assess the potential effects of common method variance (CMV) (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003). An EFA using varimax rotation was conducted using all single items associated with the focal variables of this study. The unrotated factor solution revealed thirteen separate factors with the first factor only accounting for 24% of total variance. As such, common method variance was not considered a threat in the present study.

Hierarchical Multiple Regression Analyses

Hypotheses were assessed via five hierarchical multiple regression analyses (see Table 2). Predictor variables were mean-centered in order to circumvent problems relating to multicollinearity between the main effects and two-way interactions (see Aiken & West, 1991). For all analyses, the control variables were entered on Step 1, the main effects (stressor and identification variables) entered on Step 2, and interaction terms (i.e., stressor x

identification) entered on Step 3. Results significant at $p < .10$ are interpreted due to the exploratory nature of the research and the inclusion of all relevant main and interactive effects in one regression per outcome. As can be seen in Table 2, entry of the work stressor and identification variables accounted for a significant increment in variance on job satisfaction (R^2 *ch.* = .22, $F(7,305) = 14.68$, $p < .01$), intentions to leave (R^2 *ch.* = .16, $F(7,304) = 9.57$, $p < .01$), organizational commitment (R^2 *ch.* = .39, $F(7,306) = 27.81$, $p < .01$), work unit commitment (R^2 *ch.* = .36, $F(7,306) = 25.80$, $p < .01$), and psychological health (R^2 *ch.* = .14, $F(7,305) = 12.83$, $p < .01$).

For work stressors, analyses revealed (partially supporting H1a and H1b) that role conflict was related to lower levels of work unit commitment ($\beta = -.09$, $p = .09$) and lower psychological health ($\beta = -.09$, $p = .07$). Supporting H1a and H1b, role clarity was a significant predictor of higher levels of job satisfaction ($\beta = .24$, $p < .01$), organizational commitment ($\beta = .16$, $p < .01$), work unit commitment ($\beta = .17$, $p < .01$), and psychological health ($\beta = .13$, $p < .01$), and lower intentions to leave ($\beta = -.17$, $p < .01$). Lastly, providing mixed support for H1a and H1b, role overload was related to lower levels of psychological health ($\beta = -.22$, $p < .01$) and higher levels of work unit commitment ($\beta = .16$, $p < .01$).

The results further revealed that organizational identification was significantly related to higher job satisfaction ($\beta = .23$, $p < .01$) and organizational commitment ($\beta = .28$, $p < .01$), and lower intentions to leave ($\beta = -.16$, $p < .05$). Corporate identification was significantly related to higher levels of organizational commitment ($\beta = .20$, $p < .01$) and lower levels of intentions to leave ($\beta = -.17$, $p < .05$), and humanistic identification was significantly related to higher organizational commitment ($\beta = .13$, $p < .05$). Organizational identification was significantly related to higher work unit commitment ($\beta = .16$, $p < .05$), and work unit identification was significantly related to higher work unit commitment ($\beta = .36$, $p < .01$) and psychological health ($\beta = .11$, $p < .05$).

Identification and stress buffering effects. Entry of all twelve interactions as a set in each regression explained significant variance on job satisfaction (R^2 *ch.* = .06, $F(12,293)$ = 2.42, $p < .01$) and neared significance in variance explained in intentions to leave (R^2 *ch.* = .05, $F(12,292) = 1.72$, $p = .06$) (see Table 2). While entry of the interaction terms as a set did not significantly explain variance in the commitment variables or psychological health, it can be noted that nine significant interactions were still revealed. As per Aiken and West (1991), these interactions were plotted at 1 SD below and above the mean and are discussed in terms of the type of identification.

Organizational identification. The results revealed three significant interactions relating to organizational identification (see Figures 1, 2, and 3). First, supporting H2, the interactions of role clarity and organizational identification on job satisfaction ($\beta = .21$, $p < .05$) and role conflict and organizational identification on organizational commitment ($\beta = -.17$, $p < .05$) were significant. Figure 1 shows that high identifiers always had higher job satisfaction than low identifiers. However, it also reveals that as role clarity lowered, job satisfaction significantly decreased for high identifiers ($B = .42$, $t(294) = 4.43$, $p < .01$) but stayed the same for low identifiers ($B = .08$, $t(294) = 1.08$, *ns*). This result does not support a buffering effect for high identification, but rather for low identifiers. On the other hand, inspection of Figure 2 reveals support for a buffering effect for high identifiers, but interestingly, higher role conflict seemed to have positive effects for low identifiers. High organizational identifiers were buffered from the negative effects of increased role conflict on levels of organizational commitment ($B = -.03$, $t(295) = -.48$, *ns*). Additionally, low identifiers reported significantly higher levels of organizational commitment as role conflict increased ($B = .25$, $t(295) = 3.33$, $p < .01$).

Insert Figures 1 and 2 about here

Organizational identification neared significance in its interaction with role clarity in the prediction of psychological health (β = .12, p = .06). Failing to support hypotheses, the plotted interaction (see Figure 3) shows that high identifiers reported lower levels of psychological health as role clarity reduced (B = .17, t(294) = 3.55, p < .01). As such, they were not protected from increasing ambiguity in their jobs. On the other hand, low identifiers psychological health was not affected by decreasing clarity (B = .03, t(294) = .63, *ns*).

Insert Figure 3 about here

Corporate identification. Inspection of Table 2 reveals that corporate identification neared significance in its interaction with role clarity in the prediction of work unit commitment (β = -.13, p = .06). Additionally, corporate identification interacted with role conflict (β = .13, p < .05) and role overload (β = -.14, p < .05) in the prediction of psychological health. While these effects did not support H2, some buffering effects for the work stressor-employee adjustment relationship were evident.

First, Figure 4 shows that high corporate identifiers' levels of work unit commitment were protected against the negative effects of decreasing role clarity (B = .06, t(295) = -.83, *ns*). Conversely, low identifiers reported significantly lower levels of work unit commitment as role clarity decreased (B = .27, t(295) = 3.45, p < .01). Figure 5 also reveals a buffering effect for high corporate identifiers. More specifically, psychological health for high work unit identifiers did not change as levels of role conflict increased (B = .02, t(294) = .38, *ns*). Conversely, low identifiers reported significantly lower levels of psychological health as role conflict increased (B = -.12, t(294) = -2.61, p < .01).

Insert Figures 4 and 5 about here

Inspection of Figure 6 reveals that the interaction of role overload and corporate identification did not support a buffering hypothesis for high identifiers but rather for low identifiers. As can be seen, high corporate identifiers' psychological health was not protected against the negative effects of increasing role overload, rather, it significantly decreased (B = -.18, $t(294)$ = -3.76, $p < .01$). Conversely, the psychological health of low identifiers did not change significantly as a result of increasing role overload (B = -.03, $t(294)$ = -.73, *ns*).

Insert Figure 6 about here

Humanistic identification. Inspection of Table 2 reveals that role conflict interacted with humanistic identification to differentially predict job satisfaction (β = .21, $p < .05$) and intentions to leave (β = -.24, $p < .05$). Each result provides support for H2. First, Figure 7 shows that the job satisfaction of high identifiers increased as levels of role conflict increased, although this increase was not statistically significant (B = .09, $t(294)$ = 1.50, *ns*). This is favorable for high humanistic identifiers. Conversely, employees reporting a low humanistic identification were not protected from the negative effects of role conflict on their job satisfaction (B = -.21, $t(294)$ = -.326, $p < .01$). Also supporting H2, Figure 8 shows that high humanistic identifiers were protected from the negative effects of increasing role conflict on intentions to leave (B = -.19, $t(293)$ = -1.77, *ns*). Further, intentions to leave were significantly higher for low humanistic identifiers as role conflict increased (B = .31, $t(293)$ = 2.82, $p < .01$).

Insert Figures 7 and 8 about here

Work unit identification. Supporting H3, the interaction of work unit identification and role overload significantly predicted psychological health (β = .13, $p < .05$). As per Figure 9, the psychological health of those with high levels of work unit identification was protected against the potential negative impact of high role overload (B = -.04, $t(294)$ = -.84, *ns*). Conversely, those with a low work unit identification reported significantly lower levels of psychological health as role overload increased (B = -.17, $t(294)$ = -3.96, $p < .01$).

Insert Figure 9 about here

Overview of Results

The analyses revealed several significant results. First, entry of stressors and variables generally predicted less favorable reports of job-related attitudes and psychological health. interestingly, entry of the identification variables revealed that the distal identifications were generally more influential on distal outcomes and the proximal identification was more influential on proximal outcomes.

In line with expectations, the analyses revealed some evidence for the buffering effects of high identification on the negative impacts of work stressors (particularly role conflict) on job satisfaction, organizational commitment, work unit commitment, intentions to leave, and psychological health. However, the results also revealed buffering effects for low levels of identification in mitigating the negative effects of low role clarity and high role overload on job satisfaction and psychological health. Generally, the results revealed that greater significance was associated with the distal identifications (i.e., organizational, corporate, and humanistic) than the more proximal (work unit) identification.

Discussion

This study was designed to extend the scope of occupational stress and identification theory. First, it was hypothesized that work stressors would exert negative main effects on levels of employee adjustment. Additionally, it was hypothesized that different types of workplace identification would be differentially influential for the management of occupational stress. More specifically, it was expected that distal identifications (i.e., with the organization overall, corporate or humanistic aspects of the organization) would be characterized by greater stress buffering properties on distal employee adjustment outcomes. Further, that proximal identification (i.e., with the work unit) would be effective as a buffer of the negative effects of stressors on more proximal employee adjustment outcomes.

For the most part, the results supported findings of previous researchers regarding main effects of work stressors on employee adjustment (Abramis, 1994; Örtqvist & Wincent, 2006). Work stressors as a set explained significant variance in all employee adjustment variables assessed, supporting both H1a and H1b. In particular, and in line with H1a, role clarity was related to more favorable adjustment, and role conflict was related to less favorable levels of employee adjustment. Interestingly, though, role overload, while negatively related to psychological health (supporting H1b), was positively related to work unit commitment.

This latter positive relationship was not in line with H1a. It is important to note, however, that research relating to negative effects of overload on adjustment is not conclusive. For instance, Chang and Hancock (2003) found that role overload was not related to job satisfaction with new nursing recruits and other studies have similarly found a positive or non-significant relationship between role overload and commitment (e.g., Blegen, 1993; Duquette, Kerouac, Sandhu, & Beaudet, 1994). A number of reasons have been proposed to explain a positive relationship between role overload and work unit commitment including the notion that greater job knowledge and experience in dealing with workplace issues may

result in the employment of effective work stress strategies (Chang & Hancock, 2003). Alternatively, Spector and Jex (1998), and LePine, Podsakoff, and LePine (2005) highlight that having a large amount of work does not automatically result in negative employee outcomes as many people enjoy having a large amount of work and may not find high work demands a stressor, but rather a source of challenge. This effect may be magnified at the work unit level where the unit can collectively develop both support-based and instrumental strategies for dealing with a large work load.

While not a focal aspect of this study, inspection of the main effects for identification revealed that more distal, higher order identifications were related to favorable employee adjustment as indicated by more distal outcomes. Moreover, more proximal (work unit) identification were significantly linked to proximal employee adjustment outcomes. This result is in line with Ashforth and Johnson's (2001) claim that generally lower order identifications are more salient in terms of work-related outcomes. Indeed, the present study develops this idea that stems from SIT and OI theory. It is possible that higher levels of higher order identifications (organizational, corporate, and/or humanistic) provide a mechanism for both intergroup support and sharing related to the organization and components thereof. These linkages and opportunities thus strengthen the mesh that leads to stronger relationships with outcomes that revolve around the organization more generally. Within the work unit the concept is similar but constrained to within the group. As such, the mesh that is strengthened from heightened support is related to the work unit and thus leads to stronger within-group outcomes.

Stress Buffering Effects

The key aim of the present study was to extend our theoretical understanding of occupational stress theory by investigating the stress buffering properties of different levels and types of workplace identifications. Building on the concepts underlying SIT and OI

theory, it was expected that stress buffering effects of different types of identifications would be seen where the identification type and outcome type were congruent in either their distal or proximal nature. Several key theoretical contributions are highlighted by this study.

At the broadest level, this study highlights that identification and different types or foci of identification matter in the work stressor-employee adjustment process. This is clearly supported by the fact that nine interactions (at $p < .06$) were revealed; eight of which related to organization-level identification [i.e., organizational (3), corporate (3), humanistic (2)], and one related to work unit identification. While previous research has suggested there are effects of different types of identification in this process, none have conducted an explicit investigation of multiple types of identification as presented by this study. This study points out that a focus on identification, and more specifically understanding different identities and ascription of importance to these by employees can provide key insights in the management of occupational stress.

Several more focused theoretical contributions are subsequently notable in that this study contributes to our understanding of which identifications matter in different contexts. First, six stress buffering effects for high identifiers were found in this study. Overall, these results are in line with literature demonstrating a buffering effect related to high identification (e.g., Witt, Andrews, & Carlson, 2004), a sense of belonging (e.g., Sargent, et al., 2002), and subjective fit with organizational culture (Newton & Jimmieson, 2008, 2009). Of these six interactions, four effects conformed with hypotheses (H2 or H3). More specifically, three interactions involving distal identifications showed buffering effects related to distal outcomes and one interaction involving proximal identification demonstrated a buffering effect on the proximal outcome of psychological health. These results, then, provide empirical support for the notion that SIT can be useful in understanding stress buffering effects more clearly. According to this theoretical perspective, and in an occupational context,

more distal identifications have enabled a broader source of support that subsequently absorbs the potential negative impacts of stressors on distal affective (job-related) outcomes. On the other hand, we have demonstrated that proximal within-group support facilitated by a higher work unit identification has the similar effect but moreso on (the more proximal) health outcomes for employees. This distinction has not yet been clearly demonstrated in the literature and represents a key theoretical contribution that requires future investigation by researchers.

It is important to note that a further two of the stress buffering effects for high identifiers did not conform to the hypothesized proximal identification-proximal outcome/distal identification-distal outcome effect (see Figures 4 and 5). In both instances, these effects were related to corporate identification buffering the potential negative effects of low clarity on work unit commitment and high role conflict on psychological health. This result is important to stress theory as it highlights the beneficial role high corporate identification can play in more proximal outcomes for employees. This result also has implications for the understanding of the proximal/distal distinction as discuss by OI theory. Indeed, corporate identification has been considered a more distal identification yet its stress buffering properties were unexpectedly associated with proximal outcomes.

Interestingly, further exploration of the results reveals that five of the six stress buffering results were related to a sub-component of the organization in some way: the work unit, the humanistic, or the corporate component of the organizational identification. Indeed, Ashforth and Johnson (2001) state that lower order (i.e., more proximal) identifications are more salient than higher order identifications in terms of work-related outcomes. In the present study, humanistic and corporate identifications were considered to be distal as they relate to the organization overall with the work unit identification only truly representing a lower order (proximal) identification. This outcome highlights the distinctions that need to be

made in specifying the difference between lower and higher order, and distal and proximal identifications. While the humanistic and corporate identifications are distal in this study, the results suggest that any specificity from the global organizational identification will be important in terms of identification salience and their potential to act as effective moderators in the work stress-employee adjustment process.

Last, it is notable that three of the nine interactions did not conform according to stress buffering theories. First, high organizational identifiers experienced the negative effects of reducing clarity resulting in lower job satisfaction and psychological health while low organizational identifiers were protected. This similar pattern of results is shown for the interaction of role overload and corporate identification on psychological health. It is important to note that all effects occurred with distal identifications (organizational and corporate identification). From an identity theory perspective, it is possible that high identifiers had to expend more mental energy in dealing with the threat to both themselves and the work unit as a result of an increased role overload or lack of role clarity (more so than those with low distal identifications).

From another perspective, low identification buffering may also be explained in terms of a breach of values and psychological contract. For instance, psychological contract theories depict strain associated with an employee's perceived breach of psychological expectations that develops between the organization (or work unit) and the employee (e.g., Lo & Aryee, 2003; Morrison & Robinson, 1997). Possibly, employees reporting high organizational or corporate identifications perceive a relative and perceived lack of clarity or overload to represent a breach of values; thus, experiencing greater strain (i.e., reduced satisfaction or psychological health). It is also possible that low identifiers did not perceive this breach. This proposition represents an avenue for further research in order to uncover the underlying relationships relating to the stress-buffering effects for low identifiers.

Overall, though, this study provides support for an identification approach to understanding work stressor mitigation in an organizational context. An identity approach to occupational stress suggests that stressors can be redefined, essentially manifesting as a collective coping strategy. This process can lead to the reframing of stressors to the point that they may actually become a source of eustress for a collective (Branscombe, et al., 1999). Indeed, most of the significant interactions in this study support this perspective of explaining stress-buffering, as those who identified generally reported more favorable job-related attitudes and psychological health as work stressors intensified. Conversely, those not part of the collective were not protected against the negative effects of such stressors.

Practical Implications

The results of the present study are of practical importance for organizations. First and foremost, managers can include an identity-based approach into their overall strategy in reducing the negative effects of stressors on employee adjustment. This study clearly highlights the important role that facilitating high levels of identification can play in promoting employee adjustment and buffering the effects of stressors on that adjustment. More specifically, managers should encourage and sponsor the development of identification with (1) aspects of the organization's overall identification as well as, (2) the work unit in which employees are based. In the nonprofit sector, specifically, this study supports the notions of humanistic and corporate identifications given the importance of these aspects to these organizations. In other sectors, the focus of the distal identifications might be different but the concepts remain the same.

From another perspective, the results of this study have implications for recruiting and selecting employees: it is vital to consider the match of the applicant to the organization. Managers need to assess the extent that potential employees identify with the organization and the subcomponents that are important to the overall suite of identities that makes up any

one organization and its work units. Such recruiting principles could mean that hired personnel come ready equipped with defences to mitigate the potential negative effects of stressors on their adjustment. This could ultimately improve individual, work unit, and organizational performance. Additionally, these results inform the way that organizations can communicate with their organizational members. Given that identifications are so impactful on employee adjustment and the occupational stress process, managers should ensure that messages and information are communicated in a way that highlights the work the organization is doing in achieving its objectives. Indeed, it is the organization's objectives and overall activities, and the way it carries out these objectives, that represents the source of employee identification that is most beneficial to the work stressor-employee adjustment relationship in this case.

Limitations and Future Directions

A number of limitations and future research directions should be noted relevant to this study. First, this study was cross-sectional and therefore mood states and dispositional variables could make results difficult to interpret (see Podsakoff, et al., 2003). However, this issue was managed with respect to entry of theoretically relevant control variables (see Spector, 2006) and Harmon's one factor test to explore whether common method variance was an issue. Nevertheless, a longitudinal design should be employed in future research to enable reduction of common method variance and investigate the relationships over time. Moreover, a longitudinal design will enable the investigation of the longer term effects of different identifications on perceptions of stressors and their relative longevity as buffers in the work stressor-employee adjustment process. Additionally, this study investigated hypotheses based on individual perceptions. While group-level effects were ruled out, future research should consider conducting individual-, work unit-, and organizational-level analyses, affording the opportunity to compare the meaning of the results from multiple

perspectives. To further understand the relationships identified in this study, future research should extend investigation to include the potential associations of different coping strategies in the relationships among work stressors, identification, and employee adjustment.

Summary

This study represents an extension of the application of SIT and organizational identity and occupational stress theory. It sought to further refine relevant foci of multiple levels of identification in an occupational context. Indeed, the effects of different identifications in the contexts of the work stressor-employee adjustment relationship and the human service nonprofit sector have not been investigated thoroughly. The results highlight both the positive effects of different identifications on employee adjustment highlighting the strength of these effects when there is congruence between the distal and proximal identifications and their corresponding distal and proximal outcomes. Indeed, this study sheds necessary light on the powerful potential of different levels of identification in reducing the negative effects or work stressors and the experience of occupational stress.

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Table 1. Descriptive data for focal variables

	Variables	Mean (SD)	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Role conflict	2.46 (.96)	(.78)												
2	Role clarity	3.83 (.86)	-.30**	(.88)											
3	Role overload	2.91 (1.04)	.47**	-.23**	(.70)										
4	Organizational identification	3.62 (.79)	-.20**	.37**	-.18**	(.91)									
5	Work unit identification	3.68 (.67)	-.13*	.24**	.02	.43**	(.76)								
6	Corporate identification	3.09 (.76)	-.09	.23**	-.09	.51**	.44**	(.71)							
7	Humanistic identification	3.44 (.70)	-.11*	.22**	-.01	.56**	.56**	.62**	(.74)						
8	Job satisfaction	3.91 (.83)	.-27**	.44**	-.22**	.44**	.25**	.32**	.29**	(.84)					
9	Organizational commitment	3.64 (.80)	-.04	.33**	-.05	.53**	.38**	.49**	.47**	.37**	(.75)				
10	Work unit commitment	3.70 (.82)	-.17**	.36**	.01	.45**	.52**	.36**	.40**	.37**	.65**	(.77)			
11	Intentions to leave	2.12 (1.07)	.22**	-.35**	.20**	-.36**	-.22**	-.32**	-.23**	-.61**	-.31**	-.33**	(.90)		
12	Psychological health	4.04 (.54)	-.42**	.41**	-.50**	.30**	.18**	.19**	.14**	.52	.21**	.30**	-.53**	(.82)	
13	Negative affectivity	2.59 (.77)	.33**	-.28**	.36**	-.17**	.01	-.06	.06	-.32**	-.05	-.07	.27**	-.61**	(.76)
14	Age	39.07 (11.52)	-.07	.16**	-.12*	.10	.04	.03	.02	.05	.04	.09	-.12*	.16**	-.05

Note. Cronbach's (1951) alpha reliability coefficients appear in the diagonal.
* $p < .05$; ** $p < .01$.

Table 2. Hierarchical multiple regression analyses on employee adjustment outcomes

Independent Variables	Job satisfaction β	Intentions to leave β	Organizational commitment β	Work unit commitment β	Psychological health β
Step 1 – Control variables					
Gender	-.09†	.07	-.01	-.07	.03
Age	.03	-.11†	.05	.10†	.13**
Negative affectivity	-.33**	.27**	-.06	-.08	-.62**
R^2	.13**	.10**	.01	.03*	.41**
Step 2 – Main effects					
Role conflict	-.08	.07	.08	-.09†	-.09†
Role clarity	.24**	.17**	.16**	.17**	.13**
Role overload	-.01	.03	.00	.13*	-.22**
Org. ID	.23**	-.16*	.28**	.16*	.03
Work unit ID	.03	-.09	.08	.36**	.11*
Corporate ID	.06	-.17*	.20**	.07	.01
Humanistic ID	.05	.06	.13*	.03	.04
R^2 Change	.22**	.16**	.39**	.36**	.14**
Step 4 – Interaction terms					
Role conflict X Org. ID	-.06	.05	-.17*	.04	.03
Role clarity X Org. ID	.21*	-.12	-.00	.08	.12†
Role overload X Org. ID	.09	-.07	.07	-.03	.05
Role conflict X Work unit ID	-.03	.09	.08	.04	-.07
Role clarity X Work unit ID	-.06	-.09	.01	.05	.04
Role overload X Work unit ID	-.02	-.03	-.01	.11	.13*
Role conflict X Corporate ID	.04	-.02	.03	.05	.13*
Role clarity X Corporate ID	-.09	.06	-.05	-.13†	-.03
Role overload X Corporate ID	-.01	.05	-.14	-.13	-.14*
Role conflict X Humanistic ID	.21*	-.24*	-.02	-.12	.01
Role clarity X Humanistic ID	-.16	.04	.06	-.02	-.05
Role overload X Humanistic ID	-.04	.04	.04	-.05	-.06
R^2 Change	.06**	.05†	.03	.04	.03

† $p < .10$; * $p < .05$; ** $p < .01$.

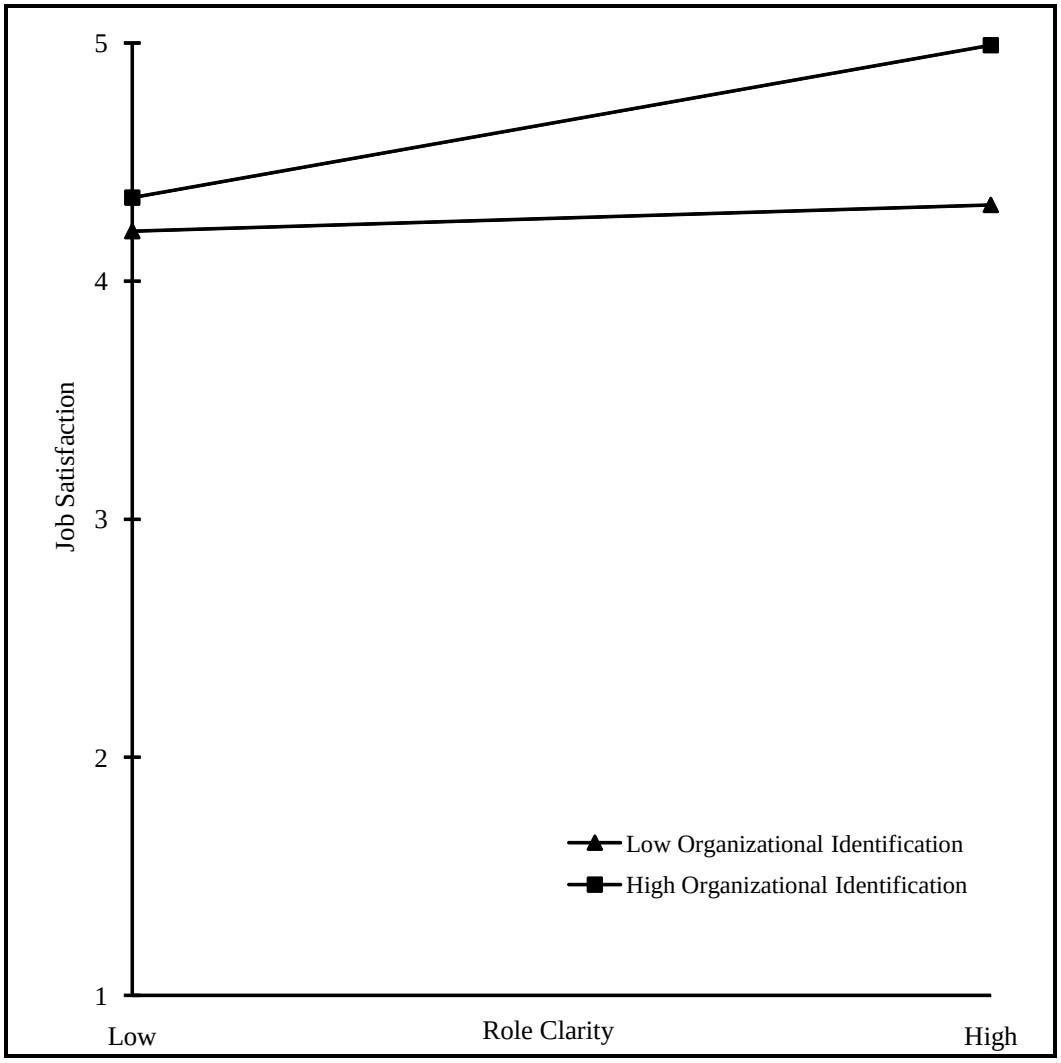

Figure 1. Two-way interaction of role clarity and organizational identification on job satisfaction

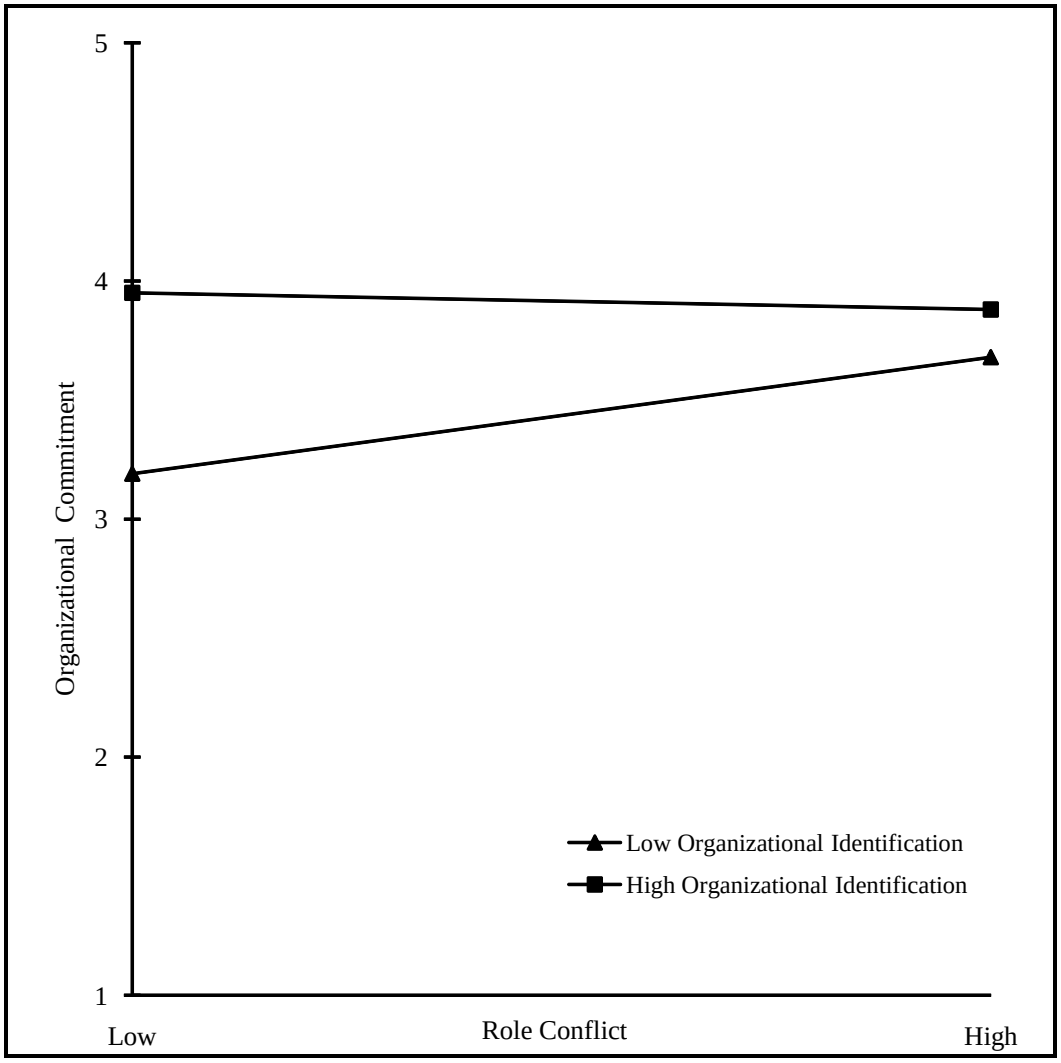

Figure 2. Two-way interaction of role conflict and organizational identification on organizational commitment

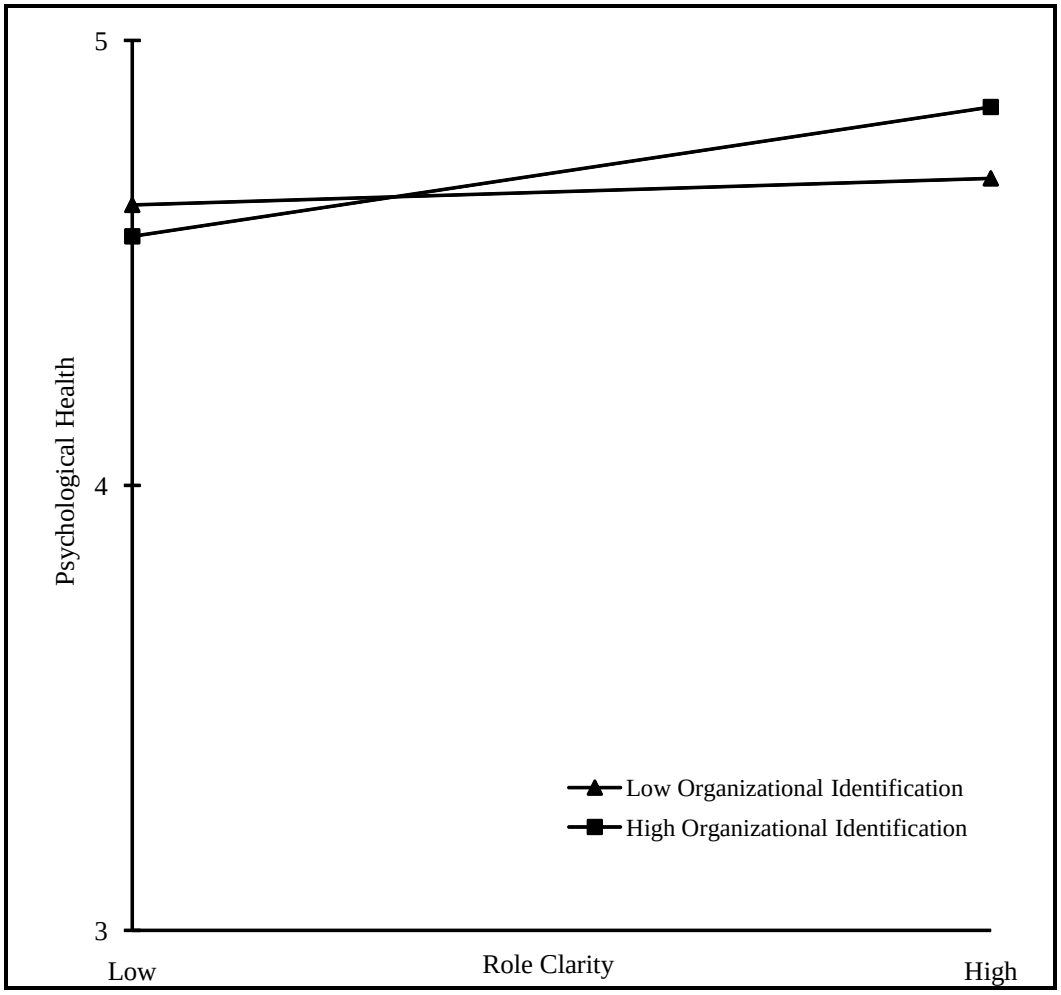

Figure 3. Two-way interaction of role clarity and organizational identification on psychological health

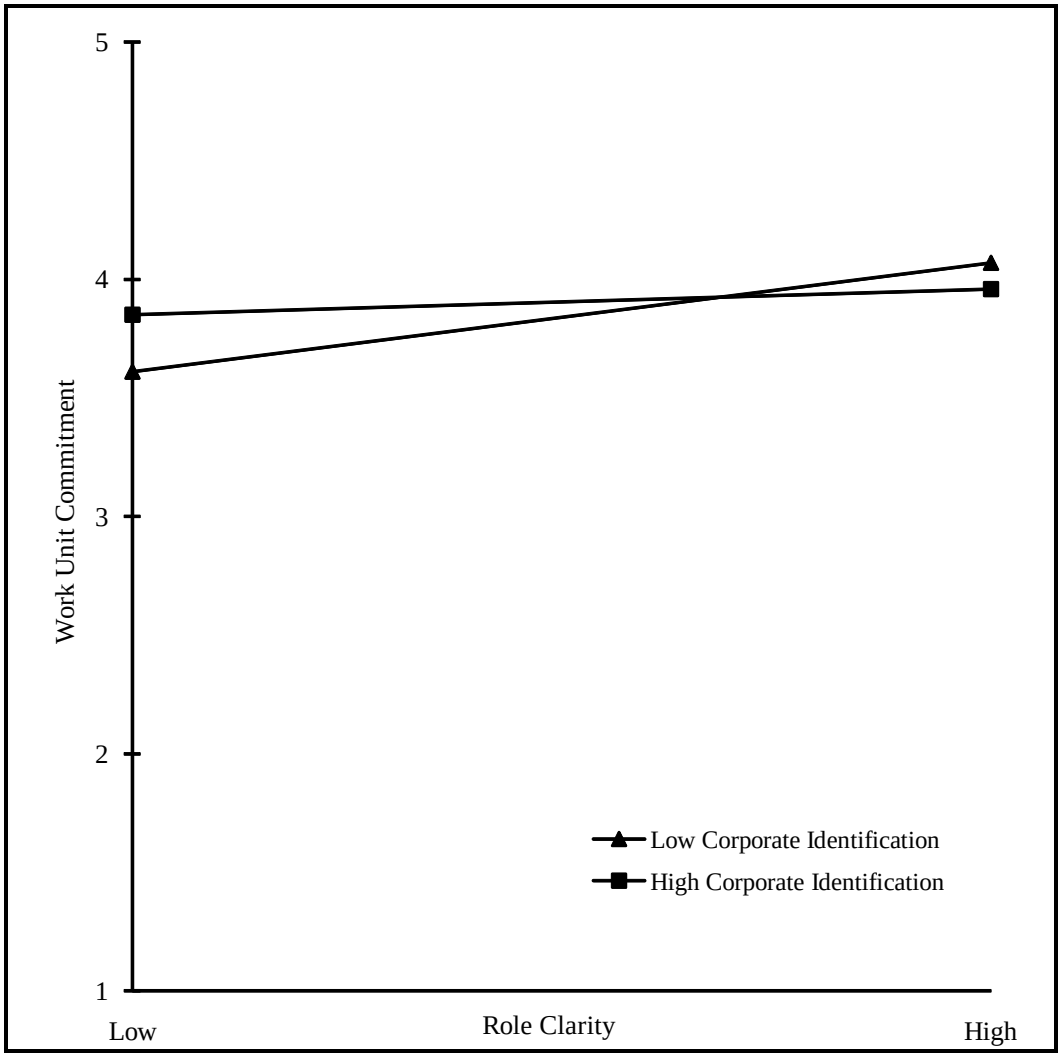

Figure 4. Two-way interaction of role clarity and corporate identification on work unit commitment

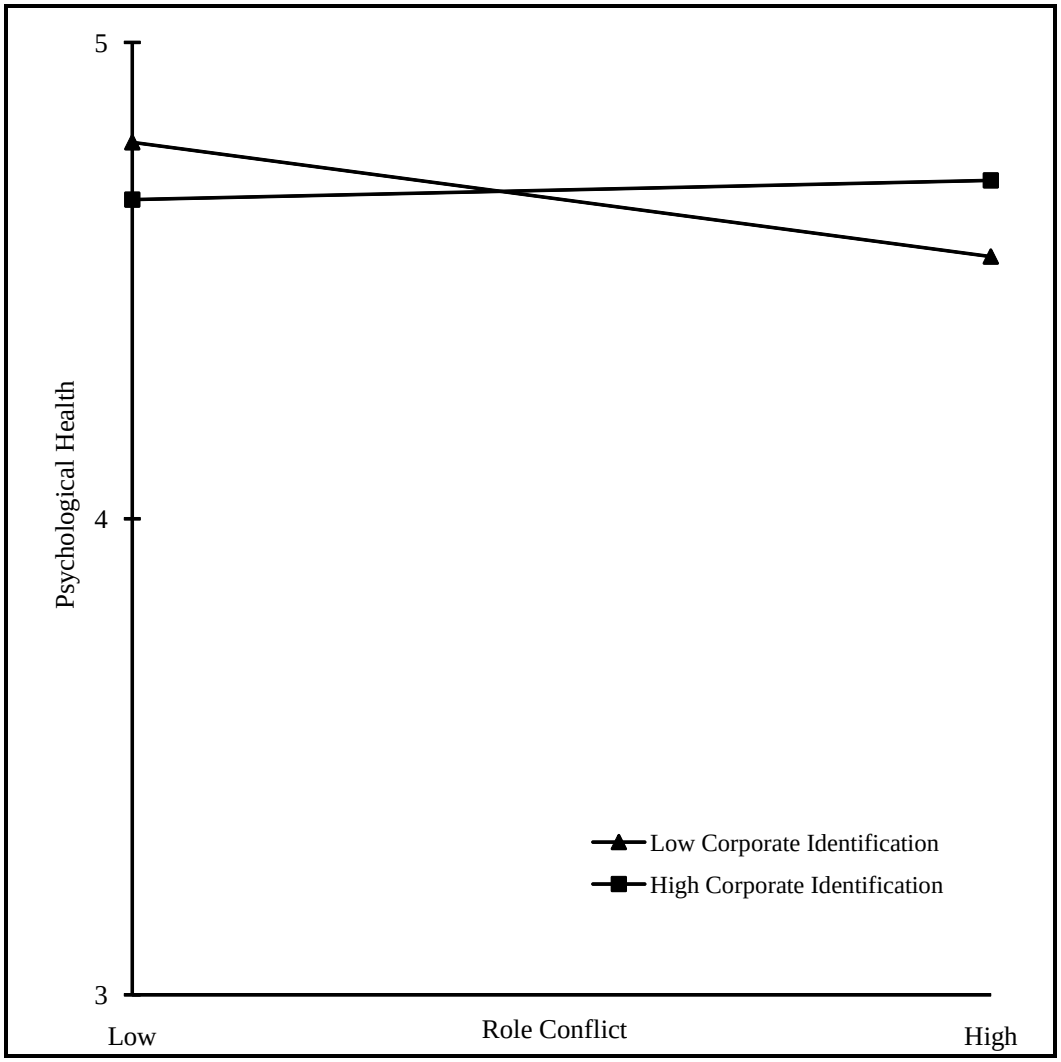

Figure 5. Two-way interaction of role conflict and corporate identification on psychological health

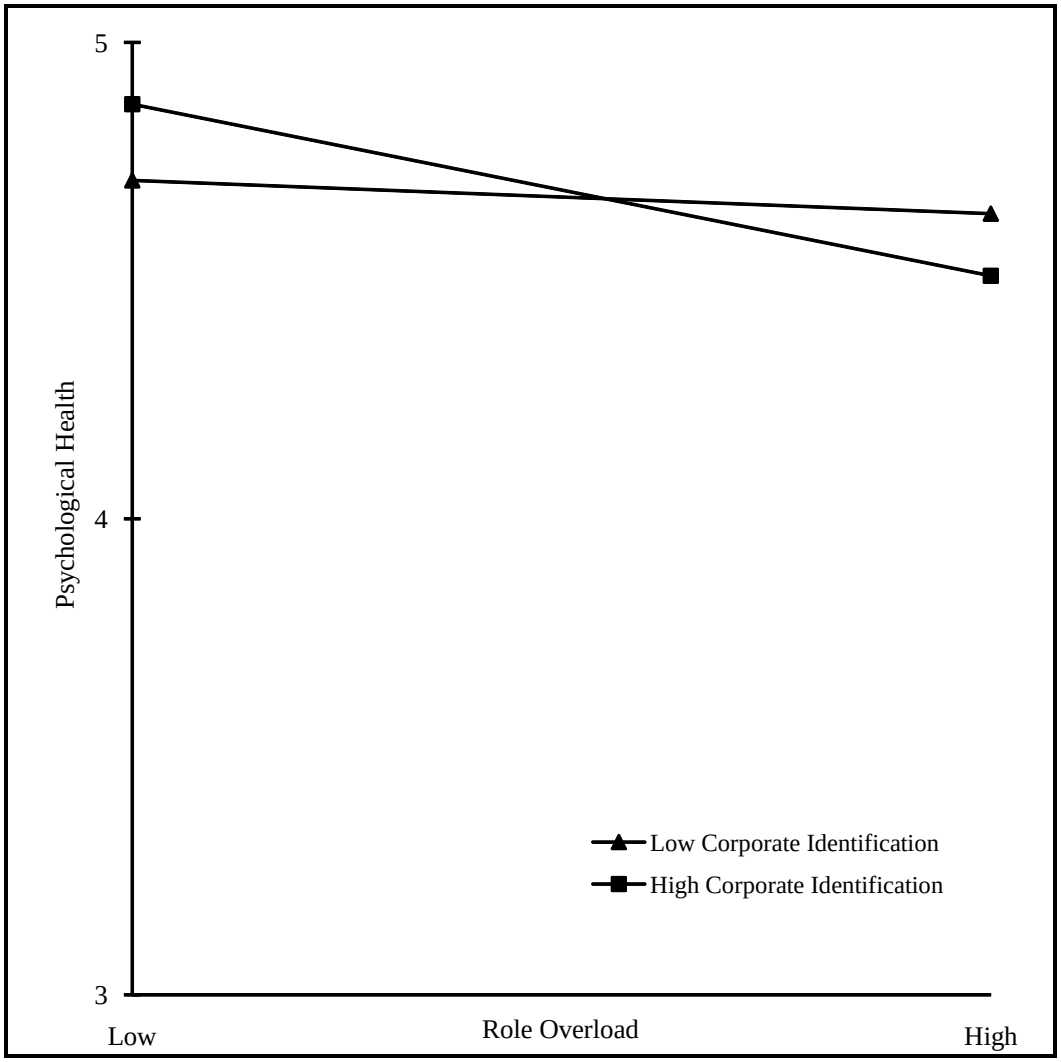

Figure 6. Two-way interaction of role overload and corporate identification on psychological health

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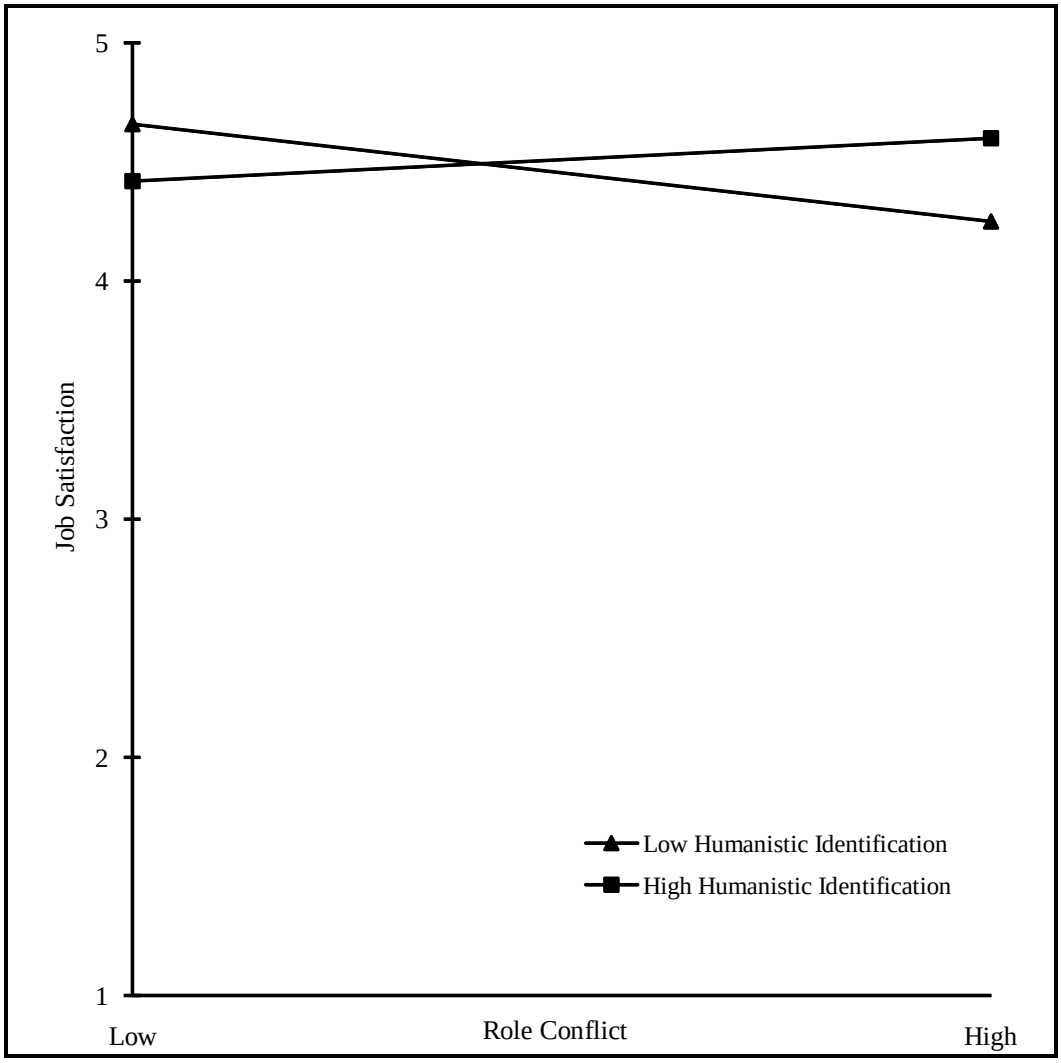

Figure 7. Two-way interaction of role conflict and humanistic identification on job satisfaction

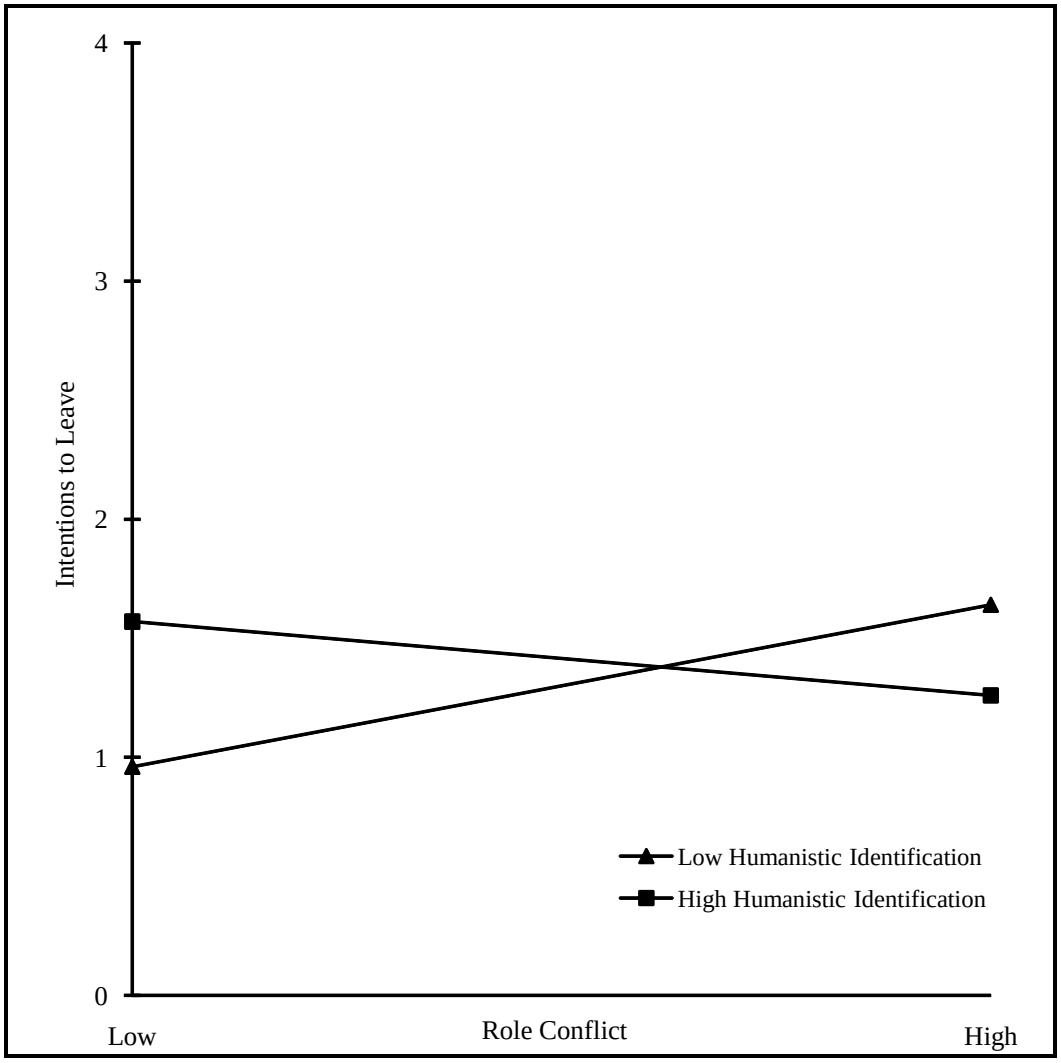

Figure 8. Two-way interaction of role conflict and humanistic identification on intentions to leave

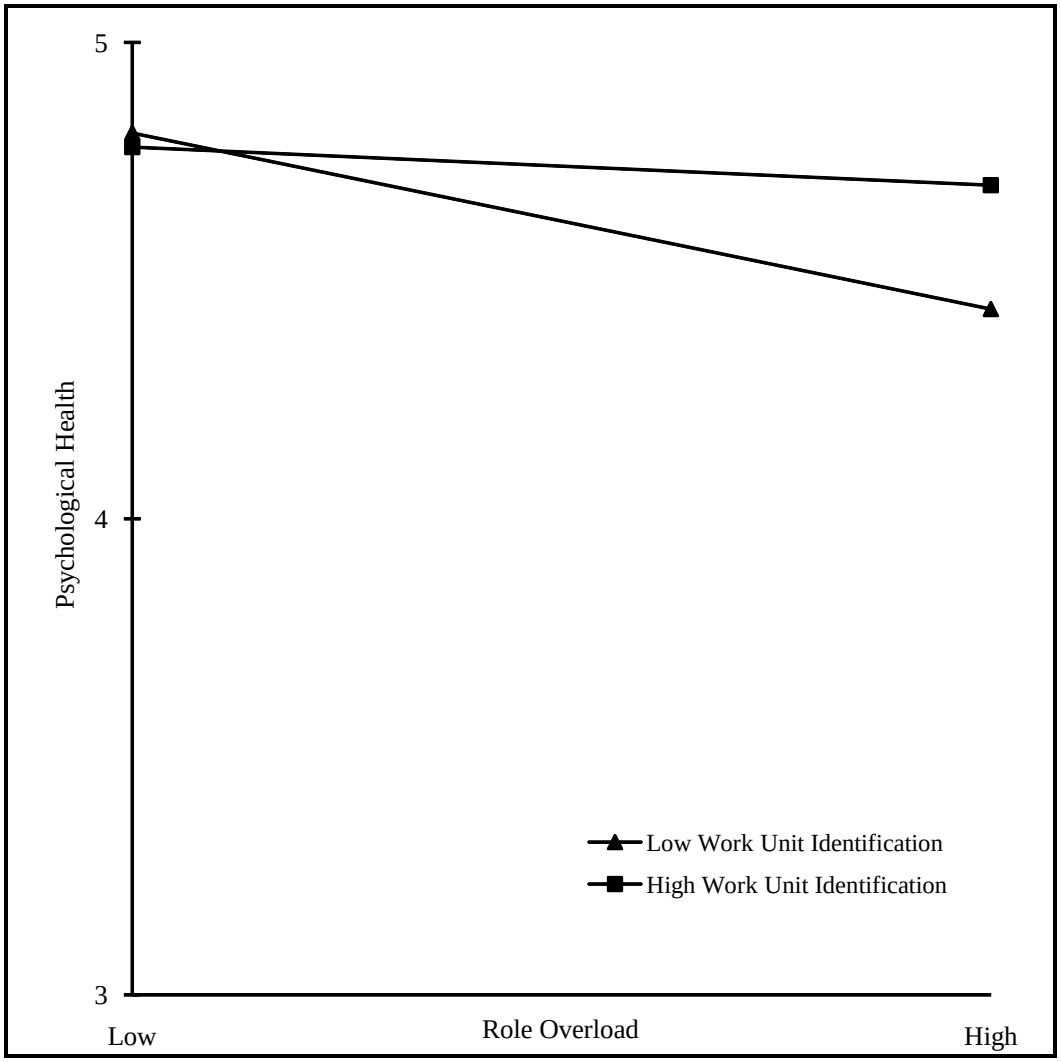

Figure 9. Two-way interaction of role overload and work unit identification on psychological health